What is Claimed is:

1. A cathode ray tube having a faceplate panel with a short axis and a long axis, the faceplate panel having a display screen on the inside of the panel and the panel extending back to a funnel which houses an electron gun system within an integral neck for producing co-planar beams, the electron gun system being arranged in a linear array which is parallel to a short axis of the screen; the cathode ray tube comprising:

a deflection system positioned over the neck of the funnel for applying electromagnetic control fields to electron beams emanating from the electron gun system directed toward the screen, the deflection system having

a first deflection coil system for generating a substantially barrel shaped magnetic field for deflecting the beams in the direction of the long axis,

a second deflection coil system for generating a substantially pincushion magnetic field for deflecting the beams in the direction of the short axis,

at least one of the deflection coil systems generating a misconvergence along at least one of the axes parallel to the direction of the co-planar beam; and,

coils for generating a magnetic field, the coils being coupled to the deflection coil systems for generating a correction field to correct the misconvergence.

2. The cathode ray tube of claim 1 wherein the coils are quadrupolar coils for generating a quadrupolar magnetic field.

3. The cathode ray tube of claim 2 wherein the deflection system comprises a yoke.

4. The cathode ray tube of claim 3 wherein the coils are arranged approximately 90 degrees from each other and positioned approximately at the dynamic astigmatism correction point of the electron gun system.

5. The cathode ray tube of claim 4 wherein the coils are dynamically controlled.

6. The cathode ray tube of claim 5 wherein the coils are driven at the horizontal deflection rate.

7. The cathode ray tube of claim 2 wherein the misconvergence is an overconvergence outer ones of the electron beams.

8. The cathode ray tube of claim 7wherein the overconvergence is in the range of 5-35 millimeters.

9. The cathode ray tube of claim 2 wherein the misconvergence caused by the deflection system increases with horizontal deflection.

10. The cathode ray tube of claim 9 wherein misconvergence is corrected by quadrupole coils driven in synchronism with the horizontal deflection.

11. The cathode ray tube of claim 10 wherein the screen aspect ratio is 16:9.